GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: February 16, 2003, 16:42:40 ; Search time 2141.74 Seconds
(without alignments)
15566.316 Million cell updates/sec

Title: US-09-497-967-1
Perfect score: 1326
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Gapop 10.0 , Gapext 1.0

Searched: 24791104 seqs, 12571243825 residues

Total number of hits satisfying chosen parameters: 49582208

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

RESULT 1
US-09-497-967-1
; Sequence 1, Application US/09497967
; GENERAL INFORMATION:
; APPLICANT: Clark, Theodore G.
; APPLICANT: Dickerson, Jr., Harry W.
; APPLICANT: Lin, Tian-Long
; TITLE OF INVENTION: DIAGNOSTIC AND PROTECTIVE ANTIGEN GENE SEQUENCES OF
; TITLE OF INVENTION: ICHTHYOPHTHIRIUS
; FILE REFERENCE: 235.00170101
; CURRENT APPLICATION NUMBER: US/09/497,967
; CURRENT FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 60/131,121
; PRIOR FILING DATE: 1999-04-27
; PRIOR APPLICATION NUMBER: 60/118,634
; PRIOR FILING DATE: 1999-02-04
; PRIOR APPLICATION NUMBER: 60/122,372
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 60/124,905
; PRIOR FILING DATE: 1999-03-17
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1326
; TYPE: DNA
; ORGANISM: Ichthyophthirius multifiliis
US-09-497-967-1

Query Match 100.0%; Score 1326; DB 18; Length 1326;
Best Local Similarity 100.0%; Pred. No. 2.6e-305;
Matches 1326; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 2
US-09-498-612-7
; Sequence 7, Application US/09498612
; GENERAL INFORMATION:
;  APPLICANT: GAERTIG, Jacek
;  APPLICANT:  DICKERSON Jr., Harry W.
;  APPLICANT:  CLARK, Theodore G.
;  APPLICANT:  THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC
;  TITLE OF INVENTION: RECOMBINANT EXPRESSION OF HETEROLOGOUS NUCLEIC ACIDS IN
;  TITLE OF INVENTION:  PROTOZOA
;  FILE REFERENCE: 235.00100101
;  CURRENT APPLICATION NUMBER: US/09/498,612
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: PCT/US00/02966
;  PRIOR FILING DATE: 2000-02-04
;  NUMBER OF SEQ ID NOS: 14
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 1326
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-498-612-7

  Query Match           100.0%;  Score 1326;  DB 18;  Length 1326;
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Db     361 GATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCT 420

Qy     421 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 480

Qy     481 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 540

Qy     541 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 600

Qy     601 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 660

Qy     661 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 720

Qy     721 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 780

Qy     781 ATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 ATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 840

Qy     841 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 900

Qy     901 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCA 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCA 960

Qy     961 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1020

Qy    1021 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1080
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1021 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1080

Qy    1081 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1140
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1081 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1140

Qy    1141 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1200
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1141 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1200

Qy    1201 AAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAA 1260
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1201 AAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAA 1260

Qy    1261 TGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTAT 1320
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1261 TGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTAT 1320

Qy    1321 TTATTG 1326
           ||||||
Db    1321 TTATTG 1326


RESULT 3
US-09-497-967-2
; Sequence 2, Application US/09497967
; GENERAL INFORMATION:
;  APPLICANT: Clark, Theodore G.
;  APPLICANT:  Dickerson, Jr., Harry W.
;  APPLICANT:  Lin, Tian-Long
;  TITLE OF INVENTION: DIAGNOSTIC AND PROTECTIVE ANTIGEN GENE SEQUENCES OF
;  TITLE OF INVENTION:  ICHTHYOPHTHIRIUS
;  FILE REFERENCE: 235.00170101
```

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;  CURRENT APPLICATION NUMBER: US/09/497,967
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  NUMBER OF SEQ ID NOS: 102
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 2486
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-497-967-2

  Query Match             100.0%;  Score 1326;  DB 18;  Length 2486;
  Best Local Similarity   100.0%;  Pred. No. 3.3e-305;
  Matches 1326;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCT 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     433 ATGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCT 492

Qy      61 GTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGAT 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     493 GTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGAT 552

Qy     121 CTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     553 CTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGA 612

Qy     181 GAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCA 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     613 GAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCA 672

Qy     241 TGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACA 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     673 TGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACA 732

Qy     301 TAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTT 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     733 TAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTT 792

Qy     361 GATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     793 GATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCT 852

Qy     421 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     853 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 912

Qy     481 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     913 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 972

Qy     541 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     973 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 1032

Qy     601 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1033 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 1092

Qy     661 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1093 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 1152

Qy     721 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1153 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 1212

Qy     781 ATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1213 ATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 1272

Qy     841 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1273 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 1332

Qy     901 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCA 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1333 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCA 1392

Qy     961 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1393 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1452

Qy    1021 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1080
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1453 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1512

Qy    1081 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1140
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1513 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1572

Qy    1141 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1200
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1573 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1632

Qy    1201 AAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAA 1260
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1633 AAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAA 1692

Qy    1261 TGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTAT 1320
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1693 TGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTAT 1752

Qy    1321 TTATTG 1326
          ||||||
Db    1753 TTATTG 1758


RESULT 4
US-09-498-612-3
; Sequence 3, Application US/09498612
; GENERAL INFORMATION:
;  APPLICANT: GAERTIG, Jacek
;  APPLICANT:  DICKERSON Jr., Harry W.
;  APPLICANT:  CLARK, Theodore G.
;  APPLICANT:  THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC
;  TITLE OF INVENTION: RECOMBINANT EXPRESSION OF HETEROLOGOUS NUCLEIC ACIDS IN
;  TITLE OF INVENTION:  PROTOZOA
;  FILE REFERENCE: 235.00100101
;  CURRENT APPLICATION NUMBER: US/09/498,612
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: PCT/US00/02966
;  PRIOR FILING DATE: 2000-02-04
;  NUMBER OF SEQ ID NOS: 14
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
;   LENGTH: 2811
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:  pBICH3 construct
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US-09-498-612-3

Query Match 99.8%; Score 1323.4; DB 18; Length 2811;
Best Local Similarity 99.9%; Pred. No. 1.5e-304;
Matches 1324; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy       2 TGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCTG 61
Db     998 TGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCTG 1057

Qy      62 TTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGATC 121
Db    1058 TTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGATC 1117

Qy     122 TTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGAG 181
Db    1118 TTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGAG 1177

Qy     182 AAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCAT 241
Db    1178 AAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCAT 1237

Qy     242 GCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACAT 301
Db    1238 GCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACAT 1297

Qy     302 AATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTTG 361
Db    1298 AATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTTG 1357

Qy     362 ATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCTC 421
Db    1358 ATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCTC 1417

Qy     422 CTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTG 481
Db    1418 CTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTG 1477

Qy     482 CTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACTG 541
Db    1478 CTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACTG 1537

Qy     542 CAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTAC 601
Db    1538 CAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTAC 1597

Qy     602 TTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGAC 661
Db    1598 TTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGAC 1657

Qy     662 CTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTG 721
Db    1658 CTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTG 1717

Qy     722 CTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAAA 781
Db    1718 CTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAAA 1777

Qy     782 TAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGCA 841
Db    1778 TAAACAAAAACGATTCTCCTGCCTCTGCAGGTGCCTAAGCTAATTTAGCCACATAATGCA 1837

Qy     842 GTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAATT 901
Db    1838 GTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAATT 1897

Qy     902 CATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCAG 961
Db    1898 CATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCAG 1957

Qy     962 GTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGTA 1021
Db    1958 GTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGTA 2017

Qy    1022 ATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGATG 1081
Db    2018 ATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGATG 2077

Qy    1082 ATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGCT 1141
Db    2078 ATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGCT 2137

Qy    1142 TTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACTA 1201
Db    2138 TTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACTA 2197

Qy    1202 AAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAAT 1261
Db    2198 AAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAAT 2257

Qy    1262 GCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTATT 1321
Db    2258 GCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTATT 2317

Qy    1322 TATTG 1326
Db    2318 TATTG 2322
```

RESULT 5
US-09-498-612-4/c
; Sequence 4, Application US/09498612
; GENERAL INFORMATION:
; APPLICANT: GAERTIG, Jacek
; APPLICANT: DICKERSON Jr., Harry W.
; APPLICANT: CLARK, Theodore G.
; APPLICANT: THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC
; TITLE OF INVENTION: RECOMBINANT EXPRESSION OF HETEROLOGOUS NUCLEIC ACIDS IN
; TITLE OF INVENTION: PROTOZOA
; FILE REFERENCE: 235.00100101
; CURRENT APPLICATION NUMBER: US/09/498,612
; CURRENT FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 60/118,634
; PRIOR FILING DATE: 1999-02-04
; PRIOR APPLICATION NUMBER: 60/122,372
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 60/124,905
; PRIOR FILING DATE: 1999-03-17
; PRIOR APPLICATION NUMBER: 60/131,121
; PRIOR FILING DATE: 1999-04-27
; PRIOR APPLICATION NUMBER: PCT/US00/02966
; PRIOR FILING DATE: 2000-02-04
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 2811
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Complement of
; OTHER INFORMATION: pBICH 3 vector construct
US-09-498-612-4

Query Match 99.8%; Score 1323.4; DB 18; Length 2811;
Best Local Similarity 99.9%; Pred. No. 1.5e-304;
Matches 1324; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy       2 TGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCTG 61
Db    1814 TGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCTG 1755

Qy      62 TTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGATC 121
Db    1754 TTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGATC 1695

Qy     122 TTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGAG 181
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Db   1694 TTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGAG 1635

Qy    182 AAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCAT 241
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1634 AAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCAT 1575

Qy    242 GCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACAT 301
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1574 GCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACAT 1515

Qy    302 AATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTTG 361
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1514 AATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTTG 1455

Qy    362 ATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCTC 421
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1454 ATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCTC 1395

Qy    422 CTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTG 481
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1394 CTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTG 1335

Qy    482 CTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACTG 541
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1334 CTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACTG 1275

Qy    542 CAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTAC 601
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1274 CAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTAC 1215

Qy    602 TTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGAC 661
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1214 TTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGAC 1155

Qy    662 CTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTG 721
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1154 CTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTG 1095

Qy    722 CTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAAA 781
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1094 CTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAAA 1035

Qy    782 TAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGCA 841
          |||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||
Db   1034 TAAACAAAAACGATTCTCCTGCCTCTGCAGGTGCCTAAGCTAATTTAGCCACATAATGCA 975

Qy    842 GTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAATT 901
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    974 GTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAATT 915

Qy    902 CATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCAG 961
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    914 CATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCAG 855

Qy    962 GTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGTA 1021
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    854 GTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGTA 795

Qy   1022 ATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGATG 1081
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    794 ATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGATG 735

Qy   1082 ATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGCT 1141
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    734 ATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGCT 675

Qy   1142 TTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACTA 1201
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    674 TTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACTA 615

Qy   1202 AAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAAT 1261
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db    614 AAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTGAAGCTACTCAAAAAGTATAAT 555

Qy   1262 GCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTATT 1321
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    554 GCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCTTATTATTTATTTCTTTCTATT 495

Qy   1322 TATTG 1326
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Db    494 TATTG 490
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RESULT 6
US-07-763-352A-14
; Sequence 14, Application US/07763352A
; GENERAL INFORMATION:
; APPLICANT: Clark, Theodore G.
; APPLICANT: Dickerson, Harry W.
; TITLE OF INVENTION: ICH IMMOBILIZATION ANTIGEN AND FISH
; TITLE OF INVENTION: VACCINE
; NUMBER OF SEQUENCES: 15
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Greenlee and Winner
; STREET: 5370 Manhattan Circle, Ste. 201
; CITY: Boulder
; STATE: Colorado
; COUNTRY: USA
; ZIP: 80303
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/763,352A
; FILING DATE: 19910920
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Ferber, Donna M.
; REGISTRATION NUMBER: 33,878
; REFERENCE/DOCKET NUMBER: 15-91
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 303/499-8080
; TELEFAX: 303/499-8089
; TELEX: 823189
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1936 base pairs
; TYPE: NUCLEIC ACID
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA to mRNA
; FEATURE:
; NAME/KEY: mat_peptide
; LOCATION: 88..1269
; FEATURE:
; NAME/KEY: sig_peptide
; LOCATION: 28..88
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 28..1272
; OTHER INFORMATION: /codon= (seq: "taa", aa: Gln)
; OTHER INFORMATION: /codon= (seq: "tag", aa: Gln)
US-07-763-352A-14

Query Match 92.3%; Score 1223.8; DB 3; Length 1936;
Best Local Similarity 99.8%; Pred. No. 7.1e-281;
Matches 1225; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy       1 ATGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCT 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      28 ATGAAATATAATATTTTATTAATTTTAATTATTTCTTTATTTATTAATGAATTAAGAGCT 87

Qy      61 GTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGAT 120
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Db      88 GTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTAGGTGCTGCTGAT 147

Qy     121 CTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGA 180
Db     148 CTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGTGCTGCTTAAGGA 207

Qy     181 GAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCA 240
Db     208 GAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGTATATGTGTACCA 267

Qy     241 TGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACA 300
Db     268 TGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCTACTTTAGCCACA 327

Qy     301 TAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTT 360
Db     328 TAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTGACAGATGTTTTT 387

Qy     361 GATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCT 420
Db     388 GATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTATAATGGTGGTTCT 447

Qy     421 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 480
Db     448 CCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTT 507

Qy     481 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 540
Db     508 GCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACT 567

Qy     541 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 600
Db     568 GCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCTACTGGCACTGTA 627

Qy     601 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 660
Db     628 CTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGTGTTAAATGCAGA 687

Qy     661 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 720
Db     688 CCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTT 747

Qy     721 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 780
Db     748 GCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAA 807

Qy     781 ATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 840
Db     808 CTAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGC 867

Qy     841 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 900
Db     868 AGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTTGTTTTTAGTAAT 927

Qy     901 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATTTCGAAGCA 960
Db     928 TCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGTAATCTCGAAGCA 987

Qy     961 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1020
Db     988 GGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCACATGCTCCAGGT 1047

Qy    1021 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1080
Db    1048 AATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGTACAGTACTTGAT 1107

Qy    1081 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1140
Db    1108 GATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAATGTTCTGCTGGC 1167

Qy    1141 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1200
Db    1168 TTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGTACTGAATGTACT 1227

Qy    1201 AAAAAATTAACTTCTGGTGCCACAGCT 1227
Db    1228 AAAAAATTAACTTCTGGTGCCACAGCT 1254
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RESULT 7
US-07-763-352A-2
; Sequence 2, Application US/07763352A
;  GENERAL INFORMATION:
;    APPLICANT:  Clark, Theodore G.
;    APPLICANT:  Dickerson, Harry W.
;    TITLE OF INVENTION:  ICH IMMOBILIZATION ANTIGEN AND FISH
;    TITLE OF INVENTION:  VACCINE
;    NUMBER OF SEQUENCES:  15
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Greenlee and Winner
;      STREET:  5370 Manhattan Circle, Ste. 201
;      CITY:  Boulder
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80303
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/763,352A
;      FILING DATE:  19910920
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Ferber, Donna M.
;      REGISTRATION NUMBER:  33,878
;      REFERENCE/DOCKET NUMBER:  15-91
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  303/499-8080
;      TELEFAX:  303/499-8089
;      TELEX:  823189
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1193 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA to mRNA
;    FEATURE:
;      NAME/KEY:  mat_peptide
;      LOCATION:  13..1125
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1128
;      OTHER INFORMATION:  /codon= (seq: "taa", aa: Gln)
;      OTHER INFORMATION:  /codon= (seq: "tag", aa: Gln)
US-07-763-352A-2

  Query Match           77.3%;  Score 1024.6;  DB 3;  Length 1193;
  Best Local Similarity   93.8%;  Pred. No. 1.8e-233;
  Matches 1106;  Conservative    0;  Mismatches    4;  Indels   69;  Gaps    1;

Qy      49 GAATTAAGAGCTGTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTA 108
Db       1 GAATTCCGAGCTGTTCCATGTCCTGATGGTACTTAGACTCAAGCTGGATTGACTGATGTA 60

Qy     109 GGTGCTGCTGATCTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGT 168
Db      61 GGTGCTGCTGATCTTGGTACTTGTGTTAATTGCAGACCTAATTTTTACTATAATGGTGGT 120

Qy     169 GCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGT 228
Db     121 GCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAGGT 180
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Qy    229 ATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCT 288
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 ATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAGCT 240

Qy    289 ACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTG 348
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 ACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAGTG 300

Qy    349 ACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTAT 408
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 ACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACTAT 360

Qy    409 AATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCC 468
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 AATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTGCC 420

Qy    469 GCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACGAT 528
          |
Db    421 G---------------------------------------------------------- 421

Qy    529 TCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCT 588
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    422 ----------CTGCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTCCT 471

Qy    589 ACTGGCACTGTACTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGT 648
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    472 ACTGGCACTGTACTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTATGT 531

Qy    649 GTTAAATGCAGACCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGC 708
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    532 GTTAAATGCAGACCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGC 591

Qy    709 GTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGT 768
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    592 GTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGT 651

Qy    769 GTACCTTGCCAAATAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTA 828
          |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db    652 GTACCTTGCCAACTAAACAAAAACGATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTA 711

Qy    829 GCCACATAATGCAGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTT 888
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    712 GCCACATAATGCAGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGACACTT 771

Qy    889 GTTTTTAGTAATTCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGT 948
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    772 GTTTTTAGTAATTCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTAATGGT 831

Qy    949 AATTTCGAAGCAGGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCA 1008
          ||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    832 AATCTCGAAGCAGGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACTACTCCAGCA 891

Qy   1009 CATGCTCCAGGTAATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGT 1068
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    892 CATGCTCCAGGTAATACTGCTACTTAAGCCACATAATGTTTGACCACATGTCCTGCTGGT 951

Qy   1069 ACAGTACTTGATGATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAA 1128
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    952 ACAGTACTTGATGATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAATGTACTAAA 1011

Qy   1129 TGTTCTGCTGGCTTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGT 1188
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1012 TGTTCTGCTGGCTTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTGATACATGT 1071

Qy   1189 ACTGAATGTACTAAAAAATTAACTTCTGGTGCCACAGCT 1227
          |||||||||||||||||||||||||||||||||||||
Db   1072 ACTGAATGTACTAAAAAATTAACTTCTGGTGCCACAGCT 1110


RESULT 8
US-09-196-161D-2
; Sequence 2, Application US/09196161D
; GENERAL INFORMATION:
;  APPLICANT:  SIN, Yoke Min
;  APPLICANT:  LAM, Toong Jin
;  APPLICANT:  GONG, Zhiyuan
;  TITLE OF INVENTION:  A RECOMBINANT VACCINE AGAINST FISH INFECTIOUS DISEASES
;  FILE REFERENCE:  Applied Research
;  CURRENT APPLICATION NUMBER: US/09/196,161D
;  CURRENT FILING DATE:  1998-11-20
;  PRIOR APPLICATION NUMBER:  9803188-3
;  PRIOR FILING DATE:  1998-09-28
;  NUMBER OF SEQ ID NOS:  17
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 316
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(315)
US-09-196-161D-2

  Query Match           23.8%;  Score 316;  DB 15;  Length 316;
  Best Local Similarity  100.0%;  Pred. No. 1e-64;
  Matches  316;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy    166 GGTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 225
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 GGTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 60

Qy    226 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 285
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 120

Qy    286 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 345
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 180

Qy    346 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 405
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 240

Qy    406 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 465
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 300

Qy    466 GCCGCTGCAGGTGTTG 481
          ||||||||||||||||
Db    301 GCCGCTGCAGGTGTTG 316


RESULT 9
US-09-196-161-1
; Sequence 1, Application US/09196161A
; GENERAL INFORMATION:
;  APPLICANT: SIN, YOKE M
;  APPLICANT: LAM, TOONG J
;  APPLICANT: GONG, ZHIYUAN
;  TITLE OF INVENTION: A RECOMBINANT VACCINE AGAINST FISH INFECTIOUS DISEASES
;  FILE REFERENCE: RECOMBINANT VACCINE FOR FISH
;  CURRENT APPLICATION NUMBER: US/09/196,161A
;  CURRENT FILING DATE: 1998-11-20
;  NUMBER OF SEQ ID NOS: 5
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;   LENGTH: 316
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-196-161-1

  Query Match           23.7%;  Score 314.4;  DB 15;  Length 316;
  Best Local Similarity  99.7%;  Pred. No. 2.4e-64;
  Matches  315;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy    166 GGTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 225
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          |||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db      1 GGTGCTGCTTAAGGAGAAGCTAATGCTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 60

Qy    226 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 285
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 120

Qy    286 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 345
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 180

Qy    346 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 405
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 240

Qy    406 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 465
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 300

Qy    466 GCCGCTGCAGGTGTTG 481
          ||||||||||||||||
Db    301 GCCGCTGCAGGTGTTG 316


RESULT 10
US-09-196-161-2
; Sequence 2, Application US/09196161A
; GENERAL INFORMATION:
;  APPLICANT: SIN, YOKE M
;  APPLICANT: LAM, TOONG J
;  APPLICANT: GONG, ZHIYUAN
;  TITLE OF INVENTION: A RECOMBINANT VACCINE AGAINST FISH INFECTIOUS DISEASES
;  FILE REFERENCE: RECOMBINANT VACCINE FOR FISH
;  CURRENT APPLICATION NUMBER: US/09/196,161A
;  CURRENT FILING DATE: 1998-11-20
;  NUMBER OF SEQ ID NOS: 5
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;   LENGTH: 316
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-196-161-2

  Query Match             23.7%;  Score 314.4;  DB 15;  Length 316;
  Best Local Similarity   99.7%;  Pred. No. 2.4e-64;
  Matches  315;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy    166 GGTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 225
          ||||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||
Db      1 GGTGCTGCTTAAGGAGAAGCTAATGCTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 60

Qy    226 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 285
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 120

Qy    286 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 345
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 180

Qy    346 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 405
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 240

Qy    406 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 465
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 300

Qy    466 GCCGCTGCAGGTGTTG 481
          ||||||||||||||||
Db    301 GCCGCTGCAGGTGTTG 316


RESULT 11
US-09-196-161D-9
; Sequence 9, Application US/09196161D
; GENERAL INFORMATION:
;  APPLICANT:  SIN, Yoke Min
;  APPLICANT:  LAM, Toong Jin
;  APPLICANT:  GONG, Zhiyuan
;  TITLE OF INVENTION:  A RECOMBINANT VACCINE AGAINST FISH INFECTIOUS DISEASES
;  FILE REFERENCE:  Applied Research
;  CURRENT APPLICATION NUMBER: US/09/196,161D
;  CURRENT FILING DATE:  1998-11-20
;  PRIOR APPLICATION NUMBER:  9803188-3
;  PRIOR FILING DATE:  1998-09-28
;  NUMBER OF SEQ ID NOS:  17
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 316
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(315)
US-09-196-161D-9

  Query Match             21.3%;  Score 283;  DB 15;  Length 316;
  Best Local Similarity   93.7%;  Pred. No. 7.4e-57;
  Matches  295;  Conservative    0;  Mismatches   20;  Indels    0;  Gaps    0;

Qy    166 GGTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGA 225
          ||  | ||| | |||||||||||||||||| | ||||||||||||||||||||||||||
Db      1 GGATCCGCTCAGGGAGAAGCTAATGGTAATCAGCCTTTCGCAGCAAATAATGCTGCTAGA 60

Qy    226 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTA 285
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGGTACCAATGCAGGTGACTTA 120

Qy    286 GCTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGA 345
          |||||||||||||||| |||||||||| | ||||||||||||||||||||||||||||||
Db    121 GCTACTTTAGCCACACAATGCAGTACTCAGTGTCCTACTGGCACTGCACTTGATGATGGA 180

Qy    346 GTGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTAC 405
          |||||||||||||||||||||||||||||| | ||||||||||||||||||||||||||||
Db    181 GTGACAGATGTTTTTGATAGATCAGCCGCACAGTGTGTTAAATGCAAACCTAACTTTTAC 240

Qy    406 TATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCT 465
          |||||||||||||||| | |||||||||||||| || | ||||||||||||||||||||
Db    241 TATAATGGTGGTTCTCCTCAGGGTGAAGCTCCTGGCCTTCAGGTTTTTGCTGCTGGTGCT 300

Qy    466 GCCGCTGCAGGTGTT 480
          ||||||||||| ||
Db    301 GCCGCTGCAGGAATT 315


RESULT 12
US-09-497-967-3
; Sequence 3, Application US/09497967
; GENERAL INFORMATION:
;  APPLICANT: Clark, Theodore G.
;  APPLICANT:  Dickerson, Jr., Harry W.
;  APPLICANT:  Lin, Tian-Long
;  TITLE OF INVENTION: DIAGNOSTIC AND PROTECTIVE ANTIGEN GENE SEQUENCES OF
;  TITLE OF INVENTION:  ICHTHYOPHTHIRIUS
;  FILE REFERENCE: 235.00170101
;  CURRENT APPLICATION NUMBER: US/09/497,967
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  NUMBER OF SEQ ID NOS: 102
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;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
;   LENGTH: 1404
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-497-967-3

  Query Match             19.0%;  Score 252.6;  DB 18;  Length 1404;
  Best Local Similarity   56.7%;  Pred. No. 2.4e-49;
  Matches  660;  Conservative    0;  Mismatches  394;  Indels  111;  Gaps    6;

Qy    167 GTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAG 226
Db    344 GTGTTAATTGTAGAATTAATTTTTATAATGAAAATGCTCCAAATTTTAATGCAGGTGCTA 403

Qy    227 GTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAG 286
Db    404 GTACATGCACAGCTTGTCCGGTAAACAGAGTTGGTGGTGCATTGACTGCTGGTAATGCCG 463

Qy    287 CTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAG 346
Db    464 CTACCATAGTCGCATAATGTAACGTCGCATGTCCTACTGGTACTGCACTTGATGATGGAG 523

Qy    347 TGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACT 406
Db    524 TAACTACTGATTATGTTAGATCATTCACAGAATGTGTTAAATGTAGACTTAACTTTTACT 583

Qy    407 ATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTG 466
Db    584 ATAATGGTAATAATGGTAATACTCCTTTCAATCCAGGTAAAAGTTAATGCACACCTTGTC 643

Qy    467 CCGCTGCAGGTGTTGCTGCCGTTACTAGTTAATGTGTACCTTGCCAACTAAACAAAAACG 526
Db    644 CGGCAATTAAACCTGCT----------------------------------------AATG 664

Qy    527 ATTCTCCTGCCACTGCAGGTGCCTAAGCTAATTTAGCCACATAATGTAGCAATTAATGTC 586
Db    665 TTGCTTAAGCTACTTTAGGTAATGATGCTACAATAACCGCATAATGTAACGTTGCATGCC 724

Qy    587 CTACTGGCACTGTACTTGATGATGGAGTGACACTTGTTTTTAATACATCAGCCACATTAT 646
Db    725 CTGATGGTACTATAAGTGCTGCTGGAGT---AAATAATTGGGTAGCACAAAACACTGAAT 781

Qy    647 GTGTTAAATGCAGACCTAACTTTTACTATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTG 706
Db    782 GTACTAATTGTGCTCCTAACTTTTACAATAATAATGCTCCTAATT--------------- 826

Qy    707 GCGTTTAAGTTTTTGCTGCTGGTGCTGCCGCTGCAGGTGTTGCTGCCGTTACTAGTTAAT 766
Db    827 ----------------------------------------TCAATCCAGGTAATAGTACAT 847

Qy    767 GTGTACCTTGCCAAATAAACAAAAACGATTCTCCT---GCCACTGCAGGTGCCTAAGCTA 823
Db    848 GCCTACCTTGCCCAGCAAATAAAGATTATGGTGCTGAAGCCACTGCAGGTGGTGCCGCTA 907

Qy    824 ATTTAGCCACATAATGCAGTACTTAATGTCCAACTGGCACTGCAATTCAAGACGGAGTGA 883
Db    908 CTTTAGCCAAATAATGTAATATTGCATGCCCTGATGGTACTGCAATTGCTAGTGGAGCAA 967

Qy    884 CACTTGTTTTTAGTAATTCATCCACATAATGTTCTTAATGCATTGCTAATTACTTTTTTA 943
Db    968 CTAATTATGTAATATTATAAACAGAATGTCTAAATTGTGCTGCTAACTTTTATTTTGATG 1027

Qy    944 ATGGTAATTTCGAAGCAGGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACT---A 1000
Db   1028 GTAATAATTTCTAGGCAGGAAGTAGTAGATGCAAAGCATGTCCAGCAAATAAAGTTTAAG 1087

Qy   1001 CTCCAGCACATGCTCCAGGTAATACTGCTACTTAAGCCACATAATGTTTGACCACATGTC 1060
Db   1088 GCGCTGTAGCAACTGCAGGTGGTACTGCTACTTTAATTGCATAATGTGCCCTTGAATGCC 1147

Qy   1061 CTGCTGGTACAGTACTTGATGATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAAT 1120
Db   1148 CTGCTGGTACTGTACTCACCGATGGAACAACATCTACTTATAAATAAGCAGCATCTGAAT 1207

Qy   1121 GTACTAAATGTTCTGCTGGCTTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTG 1180
Db   1208 GTGTTAAATGTGCTGCCAACTTTTATACTACAAAATAAACTGATTGGGTAGCAGGTATTG 1267

Qy   1181 ATACATGTACTGAATGTACTAAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTG 1240
Db   1268 ATACATGTACTAGTTGTAATAAAAAATTAACTTCTGGCGCTGAAGCTAATTTACCTGAAT 1327

Qy   1241 AAGCTACTCAAAAAGTATAATGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCT 1300
Db   1328 CTGCTAAAAAAAATATATAATG---------TGATTTCGCTAATTTTTTATCAATTTCCT 1378

Qy   1301 TATTATTTATTTCTTTCTATTTATT 1325
Db   1379 TATTATTGATTTCTTATTATTTATT 1403


RESULT 13
US-09-498-612-8
; Sequence 8, Application US/09498612
; GENERAL INFORMATION:
;  APPLICANT: GAERTIG, Jacek
;  APPLICANT:  DICKERSON Jr., Harry W.
;  APPLICANT:  CLARK, Theodore G.
;  APPLICANT:  THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC
;  TITLE OF INVENTION: RECOMBINANT EXPRESSION OF HETEROLOGOUS NUCLEIC ACIDS IN
;  TITLE OF INVENTION:  PROTOZOA
;  FILE REFERENCE: 235.00100101
;  CURRENT APPLICATION NUMBER: US/09/498,612
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: PCT/US00/02966
;  PRIOR FILING DATE: 2000-02-04
;  NUMBER OF SEQ ID NOS: 14
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
;   LENGTH: 1404
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-498-612-8

  Query Match             19.0%;  Score 252.6;  DB 18;  Length 1404;
  Best Local Similarity   56.7%;  Pred. No. 2.4e-49;
  Matches  660;  Conservative    0;  Mismatches  394;  Indels  111;  Gaps    6;

Qy    167 GTGCTGCTTAAGGAGAAGCTAATGGTAATTAACCTTTCGCAGCAAATAATGCTGCTAGAG 226
Db    344 GTGTTAATTGTAGAATTAATTTTTATAATGAAAATGCTCCAAATTTTAATGCAGGTGCTA 403

Qy    227 GTATATGTGTACCATGCCAAATAAACAGAGTAGGCTCTGTTACCAATGCAGGTGACTTAG 286
Db    404 GTACATGCACAGCTTGTCCGGTAAACAGAGTTGGTGGTGCATTGACTGCTGGTAATGCCG 463

Qy    287 CTACTTTAGCCACATAATGCAGTACTTAATGTCCTACTGGCACTGCACTTGATGATGGAG 346
Db    464 CTACCATAGTCGCATAATGTAACGTCGCATGTCCTACTGGTACTGCACTTGATGATGGAG 523

Qy    347 TGACAGATGTTTTTGATAGATCAGCCGCATAATGTGTTAAATGCAAACCTAACTTTTACT 406
Db    524 TAACTACTGATTATGTTAGATCATTCACAGAATGTGTTAAATGTAGACTTAACTTTTACT 583

Qy    407 ATAATGGTGGTTCTCCTTAAGGTGAAGCTCCTGGCGTTTAAGTTTTTGCTGCTGGTGCTG 466
Db    584 ATAATGGTAATAATGGTAATACTCCTTTCAATCCAGGTAAAAGTTAATGCACACCTTGTC 643
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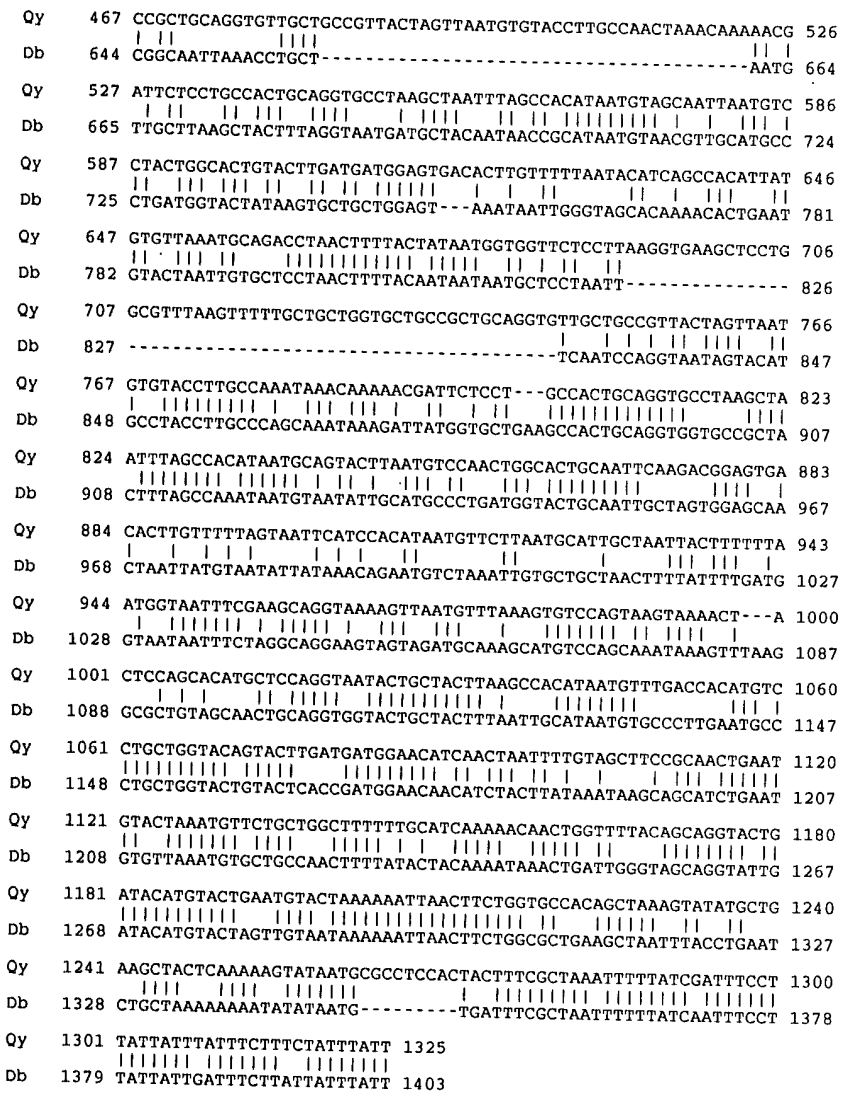
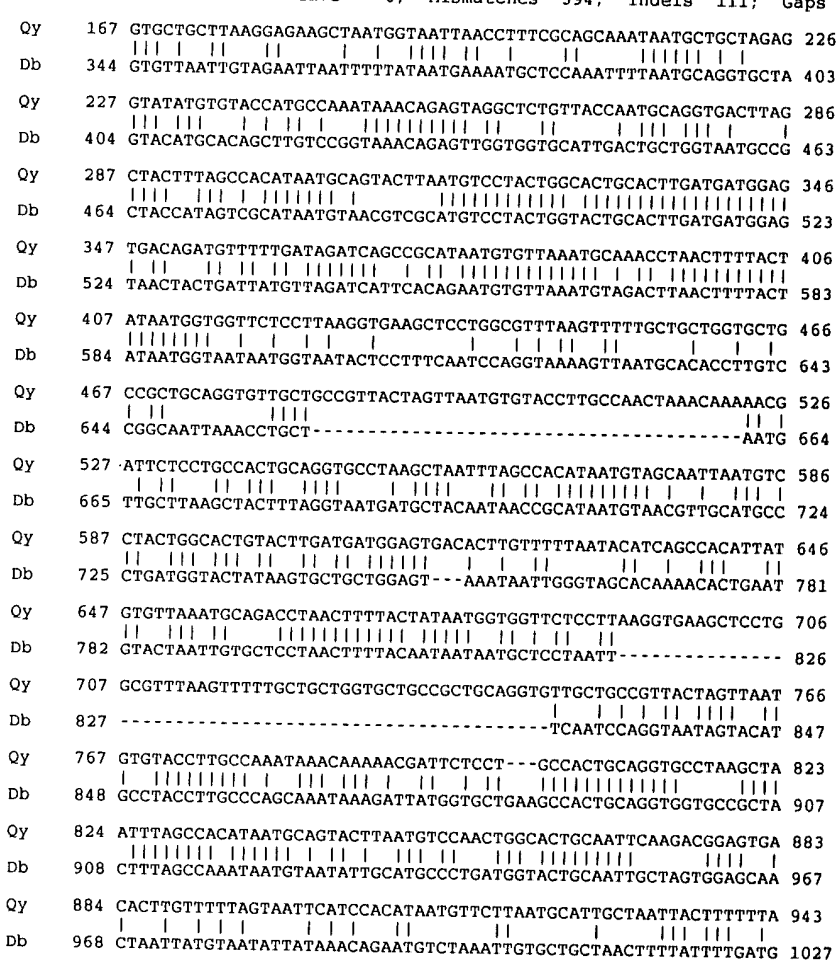


RESULT 14
US-09-497-967-44
; Sequence 44, Application US/09497967
; GENERAL INFORMATION:
; APPLICANT: Clark, Theodore G.
; APPLICANT: Dickerson, Jr., Harry W.
; APPLICANT: Lin, Tian-Long
; TITLE OF INVENTION: DIAGNOSTIC AND PROTECTIVE ANTIGEN GENE SEQUENCES OF
; TITLE OF INVENTION: ICHTHYOPHTHIRIUS
; FILE REFERENCE: 235.00170101
; CURRENT APPLICATION NUMBER: US/09/497,967
; CURRENT FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 60/131,121
; PRIOR FILING DATE: 1999-04-27
; PRIOR APPLICATION NUMBER: 60/118,634
; PRIOR FILING DATE: 1999-02-04
; PRIOR APPLICATION NUMBER: 60/122,372
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 60/124,905
; PRIOR FILING DATE: 1999-03-17
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 44
; LENGTH: 1410
; TYPE: DNA
; ORGANISM: Ichthyophthirius multifiliis
US-09-497-967-44

Query Match 19.0%; Score 252.6; DB 18; Length 1410;
Best Local Similarity 56.7%; Pred. No. 2.4e-49;
Matches 660; Conservative 0; Mismatches 394; Indels 111; Gaps 6;



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Qy     944 ATGGTAATTTCGAAGCAGGTAAAAGTTAATGTTTAAAGTGTCCAGTAAGTAAAACT---A 1000
           |  |||||||  | |||||  |  |||  |||    |   ||||||| || ||||  |
Db    1028 GTAATAATTTCTAGGCAGGAAGTAGTAGATGCAAAGCATGTCCAGCAAATAAAGTTTAAG 1087

Qy    1001 CTCCAGCACATGCTCCAGGTAATACTGCTACTTAAGCCACATAATGTTTGACCACATGTC 1060
             | | |    || |||||  ||||||||||| |    ||||||||         ||| |
Db    1088 GCGCTGTAGCAACTGCAGGTGGTACTGCTACTTTAATTGCATAATGTGCCCTTGAATGCC 1147

Qy    1061 CTGCTGGTACAGTACTTGATGATGGAACATCAACTAATTTTGTAGCTTCCGCAACTGAAT 1120
           ||||||||||| |||||    |||||||| || ||| || |  |    | ||| ||||||
Db    1148 CTGCTGGTACTGTACTCACCGATGGAACAACATCTACTTATAAATAAGCAGCATCTGAAT 1207

Qy    1121 GTACTAAATGTTCTGCTGGCTTTTTTGCATCAAAAACAACTGGTTTTACAGCAGGTACTG 1180
           ||  ||||||| ||||   ||||| | |  |||||  ||||| ||    |||||||| ||
Db    1208 GTGTTAAATGTGCTGCCAACTTTTATACTACAAAATAAACTGATTGGGTAGCAGGTATTG 1267

Qy    1181 ATACATGTACTGAATGTACTAAAAAATTAACTTCTGGTGCCACAGCTAAAGTATATGCTG 1240
           ||||||||||   |||| ||||||||||||||||||| ||   ||||||  ||  ||
Db    1268 ATACATGTACTAGTTGTAATAAAAAATTAACTTCTGGCGCTGAAGCTAATTTACCTGAAT 1327

Qy    1241 AAGCTACTCAAAAAGTATAATGCGCCTCCACTACTTTCGCTAAATTTTTATCGATTTCCT 1300
             ||||   ||||  |||||||          |  |||||||| |||||||| |||||||
Db    1328 CTGCTAAAAAAAATATATAATG---------TGATTTCGCTAATTTTTTATCAATTTCCT 1378

Qy    1301 TATTATTTATTTCTTTCTATTTATT 1325
           |||||||  |||||||  ||||||||
Db    1379 TATTATTGATTTCTTATTATTTATT 1403


RESULT 15
US-09-497-967-4
; Sequence 4, Application US/09497967
; GENERAL INFORMATION:
;  APPLICANT: Clark, Theodore G.
;  APPLICANT:  Dickerson, Jr., Harry W.
;  APPLICANT:  Lin, Tian-Long
;  TITLE OF INVENTION: DIAGNOSTIC AND PROTECTIVE ANTIGEN GENE SEQUENCES OF
;  TITLE OF INVENTION:  ICHTHYOPHTHIRIUS
;  FILE REFERENCE: 235.00170101
;  CURRENT APPLICATION NUMBER: US/09/497,967
;  CURRENT FILING DATE:  2000-02-04
;  PRIOR APPLICATION NUMBER: 60/131,121
;  PRIOR FILING DATE: 1999-04-27
;  PRIOR APPLICATION NUMBER: 60/118,634
;  PRIOR FILING DATE: 1999-02-04
;  PRIOR APPLICATION NUMBER: 60/122,372
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 60/124,905
;  PRIOR FILING DATE: 1999-03-17
;  NUMBER OF SEQ ID NOS: 102
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 100
;   TYPE: DNA
;   ORGANISM: Ichthyophthirius multifiliis
US-09-497-967-4

  Query Match             7.5%;  Score 100;  DB 18;  Length 100;
  Best Local Similarity   100.0%;  Pred. No. 2e-13;
  Matches  100;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy    1227 TAAAGTATATGCTGAAGCTACTCAAAAAGTATAATGCGCCTCCACTACTTTCGCTAAATT 1286
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 TAAAGTATATGCTGAAGCTACTCAAAAAGTATAATGCGCCTCCACTACTTTCGCTAAATT 60

Qy    1287 TTTATCGATTTCCTTATTATTTATTTCTTTCTATTTATTG 1326
           |||||||||||||||||||||||||||||||||||||||||
Db      61 TTTATCGATTTCCTTATTATTTATTTCTTTCTATTTATTG 100


Search completed: February 17, 2003, 01:35:39
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